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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/565,688	01/24/2006	Kenjiro Miyano	NAIII27017	2402

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EXAMINER

BUI PHO, PASCAL M

ART UNIT	PAPER NUMBER
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2878

MAIL DATE	DELIVERY MODE
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05/09/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/565,688

Applicant(s)

MIYANO ET AL.

Examiner

Pascal M. Bui-Pho

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 January 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 20060124.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because no hand-written and/or hand-drawn figure(s)/reference number(s) should be submitted. In addition, Figure 2 has been found to be of insufficient quality. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

4. Claim 4 is objected to because of the following informalities: on line 4, "and be next to each other" should be changed to --adjacent each other--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-3 and 5-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Yasutake (US 5,324,935).

With regards to claims 1-3 and 5-7, Yasutake discloses in Fig. 1 a scanning probe microscope comprising: a cantilever (2) with a tip probe (30) fitted at an end thereof; a light-emitting section (6); and a light receiving section (8), the light-emitting section comprising a laser diode (Column 5, lines 60-61) and an input optical fiber waveguide (7), wherein the input waveguide irradiates light from the light-emitting section towards the surface of the cantilever, the light receiving section comprising a plurality of output optical fiber waveguides (Column 4, lines 36-47) and photodiodes (8a, 8b), and the output waveguides guide light reflected by the surface towards the photodiodes.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dabbs (US 5,161,053) in view of Yasutake (US 5,324,935).

With regards to claim 1, Dabbs discloses in Fig. 3 a scanning microscope comprising: a light-emitting section (31) and a light-receiving section (45), the light-emitting section comprising a light emitting element and an input waveguide (34), wherein the input waveguide

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irradiates light from the light-emitting section towards a surface (40), the light receiving section comprising an output waveguide (43) and a light-receiving element, and the output waveguide guides light reflected by the surface towards the light-receiving element. Dabbs however remains silent with regards to said microscope being a probe microscope and having a cantilever towards which a light from the light-emitting element irradiates towards and from which a light is reflected towards the light-receiving element. In an analogous microscopic art, Yasutake discloses in Fig. 1 a scanning probe microscope comprising, among other features, a cantilever (2), a light-emitting element (6) irradiating a light towards the surface of said cantilever, and a light-receiving element receiving light reflected from said surface. Selecting a known available type of microscope and method to control a probe/cantilever would have been obvious to one of ordinary skill in the art. Hence, at the time of the invention, it would have been obvious to modify Dabbs by utilizing a scanning probe microscope and reflect said light off a cantilever surface, as taught by Yasutake, in order to provide faster scanning and output results (Column 1, lines 65-66).

With regards to claim 4, Dabbs and Yasutake disclose in Fig. 3 (Dabbs) a scanning microscope comprising, among other features, optical fibers (34, 43 of Dabbs) and optics (32, 36, 41) to focus light to/from a surface, but lack a clear disclosure of said optics having substantially spherical-shaped lenses with substantially flat facing surfaces adjacent each other. Selecting known available optics to modulate light would have been obvious to one of ordinary skill in the art. Hence, at the time of the invention, it would have been obvious to modify Yasutake by selecting spherical-shaped lenses with flat facing surfaces adjacent each other in order to reduce light loss and acquire more reliable sensing results.

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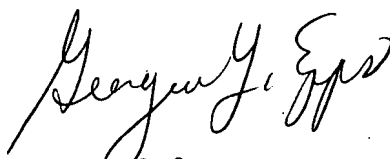
Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pascal M. Bui-Pho whose telephone number is (571) 272-2714. The examiner can normally be reached on Monday through Friday: 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on (571) 272-2328. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Pascal M. Bui-Pho
Examiner, Art Unit 2878
03 May 2007


Georgia Epps
Supervisory Patent Examiner
Technology Center 2800